

P a t e n t   C l a i m s

1. Document of value, such as for example bank note or the like, which has a security paper, which has at least one tangible marking in the form of a relief structure, which is produced by means of a laser.
2. Document of value according to claim 1, characterized in that the document of value in the area of the tangible marking has a visually noticeable colour alteration.
3. Document of value according to claim 1 or 2, characterized in that the security paper in the area of the tangible marking is blackened.
4. Document of value according to at least one of claims 1 to 3, characterized in that the security paper contains at least in certain areas additives, which intensify the colour alteration and/ or relief formation.
5. Document of value according to at least one of claims 1 to 4, characterized in that the security paper contains at least proportions of fibers of annual plants, such as cotton, linter, flax or something similar.
6. Document of value according to at least one of claims 1 to 5, characterized in that the security paper includes a mixture of cotton fibers and plastic fibers.
7. Document of value according to at least one of claims 1 to 6, characterized in that the relief structure of the marking has different relief heights and/ or degrees of blackening.
8. Document of value according to at least one of claims 1 to 7, characterized in that the tangible marking is present in the form of alphanumeric characters, bar codes, patterns or microwriting.
9. Document of value according to at least one of claims 1 to 8, characterized in that several tangible markings are present on the document of value.

10. Document of value according to at least one of claims 1 to 9, characterized in that several tangible markings are present on the document of value that are connected to each other with regard to content.
11. Document of value according to at least one of claims 1 to 10, characterized in that the tangible marking is connected to a different information on the document of value with regard to content.
12. Security paper for documents of value, such as bank notes, ID cards or the like, which has at least one tangible marking in the form of a relief structure, which is produced by means of a laser.
13. Document of value or security paper according to at least one of claims 1 to 12, characterized in that the document of value or security paper has a coating and that the tangible marking is at least partially disposed in the area of this coating.
14. Document of value or security paper according to at least one of claims 1 to 13, characterized in that the coating is a multilayer security element.
15. Document of value or security paper according to claim 14, characterized in that the security element has at least one plastic layer and one metal layer, at least the metal layer at least in the area of the tangible marking being removed by the action of the laser.
16. Document of value or security paper according to claim 15, characterized in that the plastic layer has a diffraction structure.
17. Document of value or security paper according to claim 15 or 16, characterized in that the area, in which the metal layer is removed, is larger than the area provided with a tangible marking.
18. Document of value or security paper according to at least one of claims 1 to 17, characterized in that the document of value or security paper has a junction between paper and foil and that the tangible marking extends beyond the paper/foil borderline area.

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19. Document of value or security paper according to at least one of claims 1 to 18, characterized in that the coating is a print.
20. Document of value or security paper according to claim 19, characterized in that the print and the tangible marking are disposed to each other in such a way, that an optically variable element is the result.
21. Document of value or security paper according to at least one of claims 1 to 19, characterized in that the document of value or security paper has a multilayer form.
22. Method for producing a tangible marking in a document of value, such as for example a bank note or the like, which includes a security paper characterized in that the security paper is exposed to laser radiation, and that the laser parameters and the composition of the security paper are adjusted to each other in such a way, that the result is the tangible marking in the form of a relief structure.
23. Method according to claim 22, characterized in that the marking parameters are selected in such a way, that in addition to the tangible marking a visually noticeable colour alteration of the security paper is the result.
24. Method according to claim 22 or 23, characterized in that the security paper is blackened by the laser radiation in the area of the tangible marking.
25. Method according to at least one of claims 22 to 24, characterized in that the laser parameters are adjusted in such a way, that different relief heights and/or degrees of blackening in the security paper are the result.
26. Method for producing a tangible marking in a security paper for documents of value, such as for example bank notes or the like, characterized in that the security paper at least in one partial area is exposed to laser radiation, and that the laser parameters and the composition of the security paper are adjusted to each other in such a way, that the result is the tangible marking in the form of a relief structure.

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27.

- Method according to at least one of claims 22 to 26, characterized in that a coating is applied to the document of value or security paper before the inscription with the laser, and the tangible marking is at least partially produced in the area of this coating.
28. Method according to at least one of claims 22 to 27, characterized in that as a coating a multilayer security element is applied with the help of the transfer method.
29. Method according to at least one of claims 22 to 28, characterized in that a Nd:YAG laser is used.
30. Method according to at least one of claims 22 to 29, characterized in that the inscription with the laser is effected in a high-speed fashion as usual for security printing works.